

## **Streptococcal Disease, Group A, Invasive or Toxic Shock Syndrome**

Agent: *Streptococcus pyogenes* (bacteria)

Mode of Transmission: Person-to-person transmission through respiratory droplets, contact with infected wounds or sores, or (rarely) through indirect contact with objects contaminated with the body fluids of infected persons.

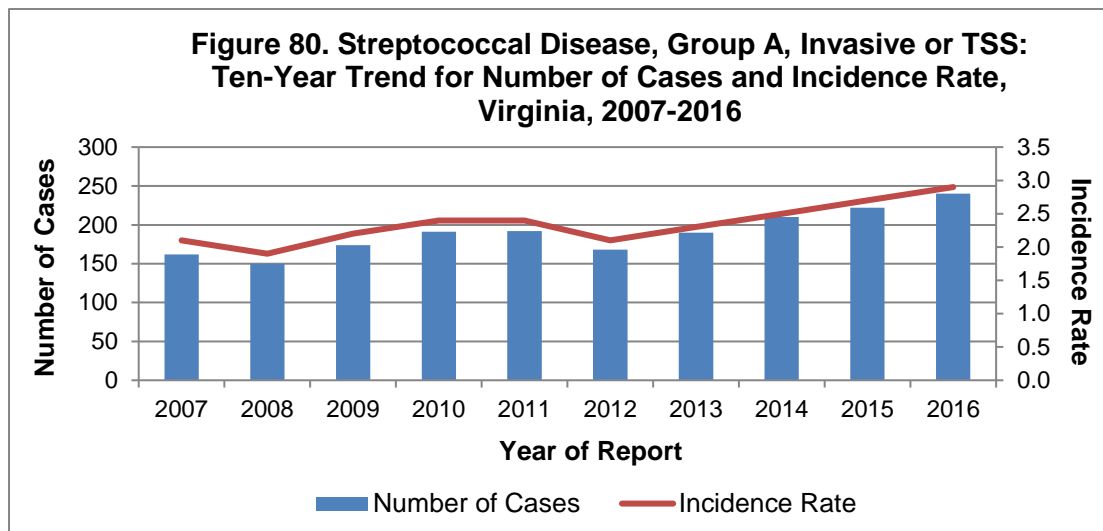
Signs/Symptoms: People may carry group A streptococci (Group A Strep) in the throat or on the skin and have no symptoms of illness. Most Group A Strep infections are relatively mild, such as “strep throat”, scarlet fever or impetigo (a skin infection). Rarely, the bacteria can lead to severe invasive infections of the blood or other internal body fluids if they enter a normally sterile site. Invasive infections often require hospitalization and may cause death.

Prevention: The spread of all types of Group A Strep infection can be reduced by careful attention to hand washing, especially after coughing or sneezing. Other preventive measures include prompt identification and treatment of non-invasive cases (such as strep throat) and temporary exclusion of infected persons from work, school or daycare until 24 hours after taking an appropriate antibiotic. Wounds should be kept clean, and medical care should be sought at the first signs of infection.

Other Important Information: Most people who come into contact with Group A Strep will not develop invasive disease. Persons at higher risk for developing invasive Group A Strep infections include older persons, immunocompromised persons, and those with chronic, underlying conditions (such as diabetes). The two most severe, but least common, forms of invasive Group A Strep infections are necrotizing fasciitis (NF) and streptococcal toxic shock syndrome (TSS). NF infections present with severe pain and rapid destruction of muscles, fat, and skin tissue. Streptococcal TSS infections are characterized by shock and rapid organ failure.

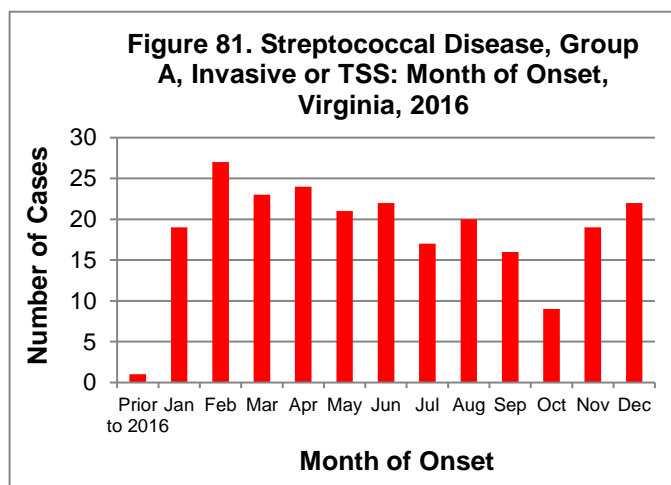
<b>Streptococcal Disease, Group A, Invasive or TSS: 2016 Data Summary</b>	
Number of Cases:	240
5-Year Average Number of Cases:	196.4
% Change from 5-Year Average:	+22%
Incidence Rate per 100,000:	2.9

During 2016, 240 cases of invasive Group A Strep infection were reported in Virginia. This represents an 8% increase from the 222 cases reported in 2015, and a 22% increase from the five-year average of 196.4 cases per year. This is the fourth consecutive year that the number of cases of invasive Group A Strep reported in Virginia has increased (Figure 80). Among the 240 cases, 233 persons were reported with invasive Group A Strep infections (age range: less than one to 98 years), and 7 persons were reported with streptococcal toxic shock syndrome (age range: 29 to 72 years).



The highest number of cases and incidence rate for invasive Group A Strep infections both occurred in the 60 year and older age group (114 cases, 6.8 per 100,000). This was followed by the 50-59 year age group and infants, with incidence rates of 3.1 and 2.9 per 100,000, respectively. The other age groups had rates between 0.2 and 2.6 per 100,000. Information on race was provided for 81% of reported cases. Incidence was the same for the black and white race populations, both with an incidence rate of 2.5 per 100,000. Incidence among males (3.0 per 100,000) was slightly higher than the rate among females (2.7 per 100,000). Geographically, incidence was highest in the southwest region (4.1 per 100,000), followed by the eastern region (3.2 per 100,000), with these same two regions having the highest two rates in 2015. Rates in the other regions ranged from 2.0 to 3.0 per 100,000. Information on incidence rates for individual localities is presented in the map below.

Cases were consistently reported throughout the year with no obvious seasonal pattern (Figure 81). Among the 240 cases reported in 2016, 21 persons died as a result of invasive Group A Strep infection (age range: 5 to 94 years), and two died from streptococcal toxic shock syndrome (both greater than 50 years). Of these 23 total deaths, 57% occurred in individuals aged 60 years and older.



Two invasive Group A Strep outbreaks were reported in 2016; both occurred in nursing homes. One invasive Group A Strep outbreak occurred in the southwest region and one occurred in the central region. Additionally, eleven non-invasive Group A Strep outbreaks were reported in 2016. Non-invasive Group A Strep outbreaks typically cause respiratory or rash illnesses, primarily presenting as “strep throat”. All eleven non-invasive Group A Strep outbreaks occurred in a school (K-12) setting. Five of these outbreaks due to

non-invasive Strep infections were reported from the northern region, four from the northwest region, and two from the central region.

## Streptococcal Disease, Group A, Invasive or TSS Incidence Rate by Locality, Virginia, 2016

